

What is claimed is:

1. A low noise pneumatic tire comprising a strip-shaped sound absorbent attached to an annular elastic fixing band and installed onto an inner surface of a tread of the tire taking advantage of the elastic force of the annular elastic fixing band, the strip-shaped sound absorbent being formed of at least two kinds of porous materials whose sound absorption characteristics with respect to frequencies are different from one another.

2. A low noise pneumatic tire comprising a strip-shaped sound absorbent attached to an annular elastic fixing band and installed onto an inner surface of a tread of the tire taking advantage of the elastic force of the annular elastic fixing band, the strip-shaped sound absorbent having a mixed composition of at least two kinds of sound absorbing portions formed of at least two kinds of porous materials whose sound absorption characteristics with respect to frequencies are different from one another.

3. The low noise pneumatic tire according to claim 2, wherein the at least two kinds of sound absorbing portions are alternately aligned in a circumferential direction of the tire.

4. The low noise pneumatic tire according to claim 2, wherein the at least two kinds of sound absorbing portions are alternately aligned in a width direction of the tire.

5. The low noise pneumatic tire according to claim 2, wherein the at least two kinds of sound absorbing portions are disposed in a mixed manner in a plane direction of the strip-shaped sound absorbent.

6. A low noise pneumatic tire comprising a strip-shaped sound absorbent attached to an annular elastic fixing band and installed onto an

entire circumference of an inner surface of a tread of the tire taking advantage of the elastic force of the annular elastic fixing band, the strip-shaped sound absorbent having a mixed composition of a sound absorbing portion formed of a first porous material whose sound absorbing coefficient at a frequency of 200 Hz is not less than 20%, and another sound absorbing portion formed of a second porous material whose sound absorbing coefficient at a frequency of 1 kHz is not less than 25%.

7. The low noise pneumatic tire according to claim 6, wherein the sound absorbing portion formed of the first porous material and the sound absorbing portion formed of the second porous material are alternately aligned in a circumferential direction of the tire.

8. The low noise pneumatic tire according to claim 6, wherein the sound absorbing portion formed of the first porous material and the sound absorbing portion formed of the second porous material are alternately aligned in a width direction of the tire.

9. The low noise pneumatic tire according to claim 6, wherein the sound absorbing portions formed of the first porous material and the sound absorbing portions formed of the second porous material are disposed in a mixed manner in a plane direction of the strip-shaped sound absorbent.

10. The low noise pneumatic tire according to any one of claims 6 to 9, wherein a surface area of the sound absorbing portions formed of the first porous material is between 30 % and 70 % of a surface area of the entire strip-shaped sound absorbent, and a surface area of the sound absorbing portions formed of the second porous material is between 30 % and 70 % of the surface area of the entire strip-shaped sound absorbent.

11. A low noise pneumatic tire comprising a strip-shaped sound absorbent attached to an annular elastic fixing band and installed onto an entire circumference of an inner surface of a tread of the tire taking advantage of the elastic force of the annular elastic fixing band, the strip-shaped sound absorbent having a mixed composition of a sound absorbing portion formed of a first porous material whose sound absorbing coefficient at a frequency of 200 Hz is not less than 20%, another sound absorbing portion formed of a second porous material whose sound absorbing coefficient at a frequency of 1 kHz is not less than 25%, and still another sound absorbing portion formed of a third porous material whose sound absorbing coefficient at a frequency of 1.5 kHz is not less than 30%.

12. The low noise pneumatic tire according to claim 11, wherein the sound absorbing portion formed of the first porous material, the sound absorbing portion formed of the second porous material, and the sound absorbing portion formed of the third porous material are alternately aligned in a circumferential direction of the tire.

13. The low noise pneumatic tire according to claim 11, wherein the sound absorbing portion formed of the first porous material, the sound absorbing portion formed of the second porous material, and the sound absorbing portion formed of the third porous material are alternately aligned in a width direction of the tire.

14. The low noise pneumatic tire according to claim 11, wherein the sound absorbing portions formed of the first porous material, the sound absorbing portions formed of the second porous material, and the sound absorbing portions formed of the third porous material are disposed in a

mixed manner in a plane direction of the strip-shaped sound absorbent.

15. The low noise pneumatic tire according to any one of claims 11 to 14, wherein a surface area of the sound absorbing portions formed of the first porous material is between 30 % and 50 % of a surface area of the entire strip-shaped sound absorbent, a surface area of the sound absorbing portions formed of the second porous material is between 20 % and 30 % of the surface area of the entire strip-shaped sound absorbent, and a surface area of the sound absorbing portions formed of the third porous material is between 20 % and 50 % of the surface area of the entire strip-shaped sound absorbent.